



Renewable Energy Survey - Instructions

Missouri Energy Survey

2/2004

How to Complete this Survey

Part 1 of this survey consists of general questions that should be answered by everyone. The following instructions apply to Part 2, which asks detailed questions about renewable energy production and use.

Complete only the sections of Part 2 that apply to you

Part 2 of the survey consists of six sections. You only need to complete the sections that apply to you. Most respondents will only need to complete one section.

If you received a printed version of the survey, the six sections are color-coded.

If you use or produce this kind of energy...	Complete this section	Color-coding
Solar photovoltaic (PV) array	Part 2 Section A	Yellow
Solar water heating	Part 2 Section B	Green
Wind turbine	Part 2 Section C	Blue
Producer/marketer of biomass fuels *	Part 2 Section D	Pink
User of biomass fuels	Part 2 Section E	Gray
Other renewable energy production or use	Part 2 Section F	White

** Note to biomass producers: If you use a portion of the biomass fuels that you produce and market another portion to outside buyers, please complete both Sections D and E of the survey.*

Report data only for types of renewable energy that fall within the survey's scope

Types of renewable energy for which we are collecting comprehensive statewide data:

We are collecting comprehensive statewide data for electric generation from solar photovoltaic arrays and wind turbines, solar hot water heating and the production and use of biomass fuels.

1. Solar energy – We are attempting to collect comprehensive statewide data on (1) photovoltaic (PV) arrays to generate electricity, and (2) solar hot water heating.
2. Wind energy – We are attempting to collect comprehensive statewide data on wind turbines used to generate electricity.
3. Biomass energy – We are attempting to collect comprehensive statewide data on biomass energy – other than ethanol and firewood – being produced and used in Missouri.

Biomass is any organic material that is available on a renewable or recurring basis. Biomass fuels may be produced and used in solid, liquid or gaseous form as in the following examples:

- ♦ Biomass fuels in solid form include sawdust and wood waste, waste paper, poultry litter and other livestock waste, crop wastes and energy crops such as switchgrass and fast-growing poplars as well as manufactured fuels based on resources such as these.
- ♦ Biomass fuels in liquid form include manufactured fuels such as biodiesel as well as waste streams that can be used as fuels such as used cooking oils.
- ♦ Biomass fuels in gaseous form include biogas, primarily methane, from landfills and anaerobic digesters.

Other types of renewable energy for which we will accept data:

In addition to the categories listed above, we will accept data for most other types of renewable energy production and use. Examples include:

- ◆ Other applications of solar energy such as the use of solar collectors or major architectural features to optimize passive solar energy use in residential and commercial buildings.
- ◆ Other applications of wind energy such as turbines used to pump water.
- ◆ Other kinds of renewable energy such as low-head hydroelectric generating units. Geothermal energy such as ground source heat pumps in residential and commercial buildings.

Types of renewable energy for which we are not collecting data

Collection of data for the following types of renewable energy is beyond the scope of this survey:

- ◆ Ethanol production and use. This information is available from another source.
- ◆ Residential firewood production and use.
- ◆ Hydroelectric generation from large hydroelectric plants.
- ◆ Geothermal energy such as ground source heat pumps in residential and commercial buildings.

Provide sufficient information about biomass to permit an estimate of its energy (BTU) content

In order to compare and aggregate energy from different sources, we estimate energy content in British Thermal Units (BTUs).

We can estimate your energy use in BTUs if you report how much energy you used in physical units, (for example, tons or cords of wood) together with other information about the composition of the biomass (for example, the type and moisture content of wood.). The more information we have about the fuel's composition, the more accurately we can estimate its BTU energy content.

If you report wood use in cords rather than tons, we need to know the type of wood and its moisture content in order to convert the unit of measure from cords to tons of wood.

Questions that you can't answer? Not enough space for your answer?



We appreciate any information you are able to provide in response to our questions. If you cannot answer all of the questions we ask, please answer those that you can.

Also, please feel free to attach additional sheets if the space that we provide is insufficient for your answers. We use an outline-style numbering scheme in the questionnaire to help you provide identification for the question you are answering.

How to request data confidentiality

You may request confidentiality for any data that you provide. Confidential data may be included in aggregate statistics but will not be published in a form that would permit an outside party to associate the specific data with a specific respondent.

Response box: On a few questions we provide a response box that looks like this:  

- ◆ Confidential data: Circle the  (lock) symbol in the response box if the data should never be released to the public. Aggregated numbers that incorporate confidential data will be published only at a level that is sufficiently aggregated to prevent identification of the individual data source.
- ◆ Ask Me: Circle the  (question mark) symbol in the response box if you are willing to release information under specific conditions or for a specific purpose with your prior permission. For example, someone may be considering installing PV for a specific application and would like advice or information from others who have done similar installations. Except for specific cases where you give permission, the data will be released only in aggregate form as described above.
- ◆ Public data: If you are willing to provide the data without restrictions on our releasing or publishing it, circle nothing and it will be assumed that the data can be made public.

For answers to other questions about the survey

Contact the Energy Center at 1-800-361-4827 or send email to john.noller@dnr.mo.gov